

Amendment under PCT Article 36

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13. (amended) A reflective liquid crystal display element comprising:
a pair of substrates;
a polymer-dispersed liquid crystal layer, in which liquid crystal drops are dispersed in a polymer, the polymer-dispersed liquid crystal layer being arranged between the pair of substrates; and
a reflective layer formed on one substrate of the pair of substrates;
wherein display is carried out by applying an electric field across the polymer-dispersed liquid crystal layer to change a light-scattering state of the polymer-dispersed liquid crystal layer; and
satisfying the relation $50\exp(-1.6\Delta n \cdot d) < SG < 360\exp(-1.88\Delta n \cdot d)$,
wherein $d(\mu\text{m})$ is a thickness of the polymer-dispersed liquid crystal layer,
SG is a scattering gain of the polymer-dispersed liquid crystal layer, and Δn is its refractive index anisotropy.

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33. (amended) A scattering display element comprising:
a scattering/transmission means switching between a scattering state, in which incident light is scattered, and a transmitting state, in which incident light is transmitted; and
a reflection means for reflecting light that is incident from a display side of the scattering/transmission means and scattered on a rear side, as well as light that is transmitted by the scattering/transmission means;
wherein the reflection means scatters and emits light that is incident

on the scattering display element, into a range of directions with anisotropy when the scattering/transmission means is in the transmitting state.

(a²) 34. (amended) The scattering display element according to Claim 33, wherein the reflection means scatters and emits light, that is incident on the scattering display element, into a range of directions that is broader in a horizontal direction of a display screen than in a vertical direction of the display screen.

35. (cancelled)

(a³) 36. (amended) The scattering display element according to Claim 33, wherein the reflection means is made by forming protrusions whose curvature in a horizontal direction of the display screen is larger than the curvature in a vertical direction of the display screen on a surface of the reflection means.

37. (cancelled)

(a⁴) 38. (amended) A scattering display element comprising:
a scattering/transmission means switching between a scattering state, in which incident light is scattered, and a transmitting state, in which incident light is transmitted;

a reflection means for reflecting light that is incident from a display

side of the scattering/transmission means and scattered on a rear side, as well as light that is transmitted by the scattering/transmission means; and

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an anisotropic transmission means, which, when the scattering/transmission means is in the transmitting state, scatters and emits light, that is incident on the scattering display element, into a range of directions with anisotropy;

wherein a surface of the anisotropic transmission means is provided with protrusions whose curvature in a horizontal direction of the display screen is larger than the curvature in a vertical direction of the display screen.

40. (amended) A scattering display element comprising:

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a scattering/transmission means switching between a scattering state, in which incident light is scattered, and a transmitting state, in which incident light is transmitted;

a reflection means for reflecting light that is incident from a display side of the scattering/transmission means and scattered on a rear side, as well as light that is transmitted by the scattering/transmission means; and

an anisotropic scattering means, which, when the scattering/transmission means is in the transmitting state, scatters and emits light, that is incident on the scattering display element, into a range of directions with anisotropy;

wherein the anisotropic scattering means includes an anisotropic diffraction means.

41. (amended) A scattering display element comprising:
a scattering/transmission means for switching between a scattering state, in which incident light is scattered, and a transmitting state, in which incident light is transmitted;
a reflection means for reflecting light that is incident from a display side of the scattering/transmission means and scattered on a rear side, as well as light that is transmitted by the scattering/transmission means;
wherein bright display is performed when the scattering/transmission means is in the scattering state;
the scattering display element comprising further comprising an emission angle modification means, which, when the scattering/transmission means is in the transmitting state, emits light, that is incident on the scattering display element, into a direction such that the emission angle is larger the incidence angle and the incident light is emitted toward a direction on a side opposite, with respect to a normal on the display surface, and at most 30°.

42. (cancelled)

43. (amended) The scattering display element according to Claim 41,
wherein the reflection means is part of the emission angle modification means.

54. (amended) The scattering display element according to Claim 41,

wherein the emission angle modification means includes a refraction/transmission means for refracting and transmitting incident light.

57. (amended) A scattering display element comprising:

a scattering/transmission means for switching between a scattering state, in which incident light is scattered, and a transmitting state, in which incident light is transmitted;

a reflection means for reflecting light that is incident from a display side of the scattering/transmission means and scattered on a rear side, as well as light that is transmitted by the scattering/transmission means; and

an emission angle modification means, which, when the scattering/transmission means is in the transmitting state, emits light, that is incident on the scattering display element, into a direction such that the incidence angle is different from the emission angle;

wherein the emission angle modification means is configured such that light that is incident on the scattering display element is emitted substantially in a direction back toward the direction of incidence.

63. (amended) The scattering display element according to Claim 41, further comprising a means for confining within the scattering display element at least a portion of the light that is incident on the scattering display element when the scattering/transmission means is in the transmitting state.

72. (amended) A method for manufacturing a display element comprising a reflection means for reflecting incident light, wherein a step of forming said reflection means comprises the steps of:

forming a resin layer including micro-particles of anisotropic shape on a substrate and providing the micro-particles in the resin layer with a predetermined directionality; and

forming a reflective layer on the resin layer.

73. (amended) A method for manufacturing a display element comprising a reflection means for reflecting incident light, wherein a step of forming said reflection means comprises the steps of:

forming a resin layer with substantially oblong planar shapes on a substrate;

providing the resin layer with flowability by heating and softening the resin layer, such that a curvature of the planar shapes with respect to a longitudinal direction is smaller than a curvature of the planar shapes with respect to a width direction; and

forming a reflective layer on the resin layer.

74. (amended) A method for manufacturing a display element comprising a reflection means for reflecting incident light, wherein a step of forming said reflection means comprises the steps of:

forming a resin layer on a substrate;

providing a surface of the resin layer with a predetermined shape by

press-forming while the resin layer is not yet cured; and
forming a reflective layer on the resin layer.

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96. (amended) The method for manufacturing a display element according to Claim 72, wherein the reflective layer is an electrode for driving the display element.

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150. (added) A method for manufacturing a display element comprising a reflection means for reflecting incident light, wherein a step of forming said reflection means comprises the steps of:

partially forming a resin layer on a substrate;
providing the resin layer with substantially symmetric oblique faces;
forming a shape having a non-symmetric cross section by eliminating at least a portion of the resin layer; and
forming a reflective layer on a region including this non-symmetric shape.

151. (added) The method for manufacturing a display element according to Claim 150, wherein the step of eliminating the resin layer is performed by dry etching with a mask of a predetermined pattern.

152. (added) The method for manufacturing a display element according to Claim 150, wherein the non-symmetric shape includes at least a sawtooth-shaped portion.